

THE INDO-AUSTRALIAN SPECIES OF THE
ANT GENUS *STRUMIGENYS* FR. SMITH:
S. DECOLLATA MANN AND *S. ECLIPTACOCA*
NEW SPECIES¹

BY WILLIAM L. BROWN, JR.

Museum of Comparative Zoology, Harvard University

This paper is a further contribution in a series which, when complete, will cover the Indo-Australian portion of the world fauna of the dacetine ant genus *Strumigenys* Fr. Smith. Previous parts, the first two of which include explanations of the abbreviations used for citing measurements and indices, are in *Psyche* 60: 85-89 (1953), 60: 160-166 (1954), 61: 68-73 (1954) and 63: 113-118 (1957).

The purpose of this part is to furnish supplementary descriptive material on *S. decollata*, known only from the type material from the Solomon Islands, and to formally describe a new species, *S. ecliptacoca*, from wet mountain forest in Dutch New Guinea. These two species are peripheral members of the *godeffroyi* group, both aberrant in a number of respects. They have in common processes situated near the midlength of the inner mandibular borders — in *decollata* an acute denticle, in *ecliptacoca* a low welt or ridge — which are quite different from anything seen in other Indo-Australian *Strumigenys* species. Whether these two species are related to each other at all closely is problematical, but it is convenient to consider them together here. Figures of both species have been prepared, but are being saved for use in collective plates in connection with the eventual keys to all the Indo-Australian species of the genus.

Strumigenys decollata Mann

Strumigenys decollata Mann, 1919, Bull. Mus. Comp. Zool.,

¹Published with the aid of a grant from the Museum of Comparative Zoology at Harvard College.

63: 353 figs. 32, 33, worker, male. Type loc.: Fulakora, Santa Isabel I., Solomons Islands.

Lectotype worker (by present selection) in MCZ: TL 4.4, HL 1.11, ML 0.66, WL 1.05; CI 63, MI 59. Agreeing with Mann's figures, except that these show the posterior cephalic and anterior clypeal excisions as considerably deeper than they should be. Fig. 32 of Mann also portrays the scapes as too slender, and the small proximal preapical tooth of the mandible is shown as much lower and less acute than in the lectotype.

This species is easily recognized by the long, narrow, depressed head, long mandibles, elongate petiolar node, and by the partially smooth, shining state of most of the areas usually sculptured and opaque in species of this genus. An outstanding character is the presence of the small, triangular, but acute tooth in addition to the preapical tooth of most Indo-Australian *Strumigenys*; this extra preapical tooth is situated proximad of the preapical tooth near the midlength of the inner mandibular border.

Distal preapical tooth of mandible about $5/8$ the length of the dorsal apical, situated very slightly distad of the apical third of ML. Teeth of apical fork subparallel, the ventral tooth $2/3$ the length of the dorsal tooth; one small acute intercalary tooth.

Petiolar node a little less than (not "more than") twice as long as broad. Mann gives the color as reddish brown; the lectotype and another headless syntype are more yellowish, and may be teneral.

Male, from type series, MCZ: TL 3.2 mm. Color now is deep ferruginous; head deeply, alitrunk dorsum lightly, infuscated; legs and antennae sordid yellowish. Notauli complete and deep; parapsidal furrows present; no propodeal teeth. Nodes shaped as in worker, smooth and shining, but spongiform appendages and basigastric costulae obsolete. Mandibles not "bidentate," but with an expanded, convex inner margin basally and a single straight, acute apical tooth. Fore-wing venation much reduced, with only R + Sc to pterostigma, stigma itself and 2r defined, and these scarcely pigmented. Few other veins represented by indistinct colorless furrows. Both wings glassy and clear, with

very few microtrichia, especially near bases; hindwing with 4 subapical hamuli.

***Strumigenys ecliptacoca* sp. nov.**

Holotype worker: TL 2.8, HL 0.68, ML 0.35, WL 0.71; CI 65, MI 51. Antenna, scape L 0.47, funiculus L 0.62, apical segment 0.35. Head in facial view shaped much as in *S. mayri*, but rather narrow and with periorcular areas more as in *godeffroyi*, i.e. without distinct preocular notches. Occipital lobes rather narrowly rounded behind, occipital excision broad and fairly deep, lateral borders of lobes broadly and evenly rounded. Dorsal surface of head evenly convex in both directions, without appreciable sulci or depressions in occipital area. Eyes rather large and convex, but not prosopient, the principal axis directed laterally. Preocular area only feebly concave; preocular laminae anterior to the concavity weakly convex in outline, as seen from dorsal view. Clypeus with anterior border medially impressed and strongly excised. Antennal scrobes indistinct, though not suddenly interrupted posteriorly; continuing above and behind the eyes to a distance equalling $2\frac{1}{2}$ eye diameters, but traceable only with difficulty, if at all. Antennal scape very slender and curved so as to allow it to fit the curve of the side of the head when retracted, as in *szalayii* group. Funicular segment I slightly longer than II-III; II and III as broad as or slightly broader than long; IV longer and stouter than I, and nearly as thick apically as is the apical segment at midlength; apical segment longer than I-IV taken together, slender and fusiform.

Mandibles slender, depressed, feebly arcuate, their inner borders nearly straight from near base to preapical tooth, after which they curve evenly in to apical fork; extreme bases distinctly narrowed and bent slightly inward, their insertions separated and situated beneath the small lobes on each side of the clypeal excision. Shafts extremely slightly and gradually broadened from base toward preapical tooth, lying so as to diverge slightly from each other at full closure. Apical fork of two parallel slender spiniform teeth, the dorsal tooth (L ca. 0.12) about $1\frac{1}{2}$ times as long as ventral tooth; a single small, acute intercalary denticle present. Pre-

apical tooth slender, spiniform, extremely feebly curved, about as long as the ventral apical tooth, situated at or very near the apical quarter of the mandibular length; distant from the dorsal apical tooth by approximately its own length. Inner mandibular borders at midlength each with a small, very low, translucent, sublamelliform process or welt, rising gradually basad and continuing apicad only a short distance before terminating suddenly in more or less of an angle. This short ledge or welt is inconspicuous, and is best seen in silhouette by light reflected from a white surface held below the mandibles.

Alitrunk slender, formed much as in members of the *szalayii* group, with the promesonotum a bit more gently and evenly rounded above, but the mesonotum concave behind and the propodeal dorsum very feebly convex, yielding the same "sway-back" appearance. Propodeal declivity gently concave, the teeth reduced to minute, subacute tubercles or angles, chiefly responsible for the angularity of the propodeum seen from the side. Infradental lamellae completely obsolete. Petiole subclavate, node longer than broad, very low and gently rounded above, not very distinctly differentiated from, and slightly longer than, its anteriorly tapered peduncle. Spongiform posterior collar narrow, with small lateral lobes extending a short distance anteriorly along the sides of the node; midventral strip well developed. Postpetiole subquadratic seen from above, nearly as long as broad ($w\ 0.15$) and a little broader than the petiolar node; with well developed, areolate spongiform masses.

Gaster with a narrow transverse dorsal spongiform border. Basal costulae fanning from bilateral origins, on the sides extending up to $1/3$ the length of the basal tergite; almost completely effaced in the middle, and much shorter. Remainder of gaster smooth and shining, as are also the postpetiole, propodeum, sides of alitrunk, posterior dorsum of petiolar node, fore coxae, clypeus and mandibles. Head and legs otherwise densely punctulate and opaque. Dorsum of pro- and mesonotum weakly punctulate, subopaque to feebly shining.

Dorsum of head with a scanty growth of very fine inconspicuous reclinate hairs and about 12 moderately long, fine

erect hairs; clypeal border hairs fine, subspatulate, inconspicuous. Antennal scapes with short, fine subreclinate hairs, directed apicad. Alitrunk dorsum with pilosity like that of head, but considerably sparser; paired fine erect hairs on humeri and anterior mesonotum. Nodes and gastric dorsum with a very few fine hairs slanting caudad. Few short subflagellate hairs at gastric apex. Underside of head and legs with moderately dense, fine, short reclinate pilosity. Color rather uniform light ferruginous yellow.

Holotype a worker selected from a series of 41 workers and dealate females taken together with eggs, larvae and pupae in an "ant plant" at Camp of I/I/1939, Netherlands Indies-American New Guinea Expedition (Third Archbold Expedition) of 1938-1939, altitude 1800 M. (L. J. Toxopeus leg.). Deposited with paratypes in Zoologisch Museum en Laboratorium, Bogor, Indonesia. Some paratypes in MCZ and elsewhere. (See Archbold, Rand and Brass, 1942, Bull. Amer. Mus. Nat. Hist., 79: 246-250, and Toxopeus, 1940, Treubia, 17: 274, 278, for notes on type locality.

Paratypes, 40 workers from type nest: TL 2.6-2.9, HL 0.65-0.69, ML 0.33-0.35, WL 0.66-0.72; CI 63-65, MI 51. Varying slightly in shape and opposite-mandible symmetry of the welts on the inner mandibular borders. The propodeal teeth also vary slightly in distinctness and acuteness, but still remain minute and denticuliform at best.

Paratypes, 2 dealate females from type nest: TL 3.3-3.3, HL 0.73-0.74, ML 0.36-0.36, WL 0.85-0.86; CI 68-67, MI 49-49, respectively. Showing the usual caste differences for the genus. Propodeal teeth low, subtriangular, but definitely dentiform. Mesonotum evenly punctulate, with a few fine, erect hairs. Infradental lamellae present as fine lines or low carinae. Side sclerites of alitrunk largely smooth and shining, as is propodeal declivity; dorsum of alitrunk completely punctulate. Basal gastric costulae relatively stronger and longer than in worker. Color slightly darker and more brownish. (Male unknown.)

Pupae: Mandibles open at more than 180° angle, as in *szalayi* group.

This species appears to fall between the *szalayi* group and such *godeffroyi* group species as *esrossi*. It differs from all

other Old World *Strumigenus* in lacking both propodeal teeth and their lamellae, and is also distinct in having the welt-like lamella on the inner mandibular border, which may represent a condition intermediate between the broad lamella of *guttulata* and toothed forms like *decollata*. *S. ecliptacoca* (from the Greek words meaning "deficient" and "point or edge") seems best placed arbitrarily in the *godeffroyi* group for the present.